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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,522	11/14/2003	Guenther Barrho	HOE-788	2225
20028	7590	06/07/2004	EXAMINER	
LAW OFFICE OF BARRY R LIPSITZ 755 MAIN STREET MONROE, CT 06468			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/714,522

Applicant(s)

BARRHO ET AL.

Examin r

Tran N. Nguyen

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-16 and 18-23 is/are rejected.
- 7) ☐ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. **Claims 1-23** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Among claims 1-23, the terms “*which*” “*it*” and “*its*” do not clearly set the reference for the intended referential subject matters or an established-antecedent-basis subject matter.

e.g., *claim 1 lines 3-5*, “each stator unit including a set of first pole shoes....formed as claw poles, *which* are disposed around the rotor axis” this is unclear whether the term “*which*” refers only to the second pole shoes, or both first and second pole shoes, or does it refer to claw poles of both first and second pole shoes? This is one example of the use of such terms “*which*” “*it*” and “*its*” makes the claimed language indefinite. The applicant is requested to ***thoroughly review the claimed language to eliminate all of such terms “which” “it” and “its”.***

In claim 1, lines 4, “a stator having at least one stator unit, each stator unit including...” is indefinite because “at least one stator unit” is understood as ***positively there is one stator unit in the motor and possible there may be more than one.*** The limitations positively set as one (single) stator unit. The possibility of more than one is not clearly and definite limitations. The claimed language, then, recites “each stator unit”, the term “each” usually used for referring one unit of plurality units. The use of the term “each” in this case is improper and indefinitely referring to there be at least two stator units while positively recites “at least one” (i.e., positively one stator unit). In light of the spec, it is understood as ***“a stator having at least one stator unit, said stator unit including...”***

In claim 10, “glass-like consistency” is indefinite because it is unclear what is “glass like consistency”? Does it means the coating material is glass or other material but having the texture similar to glass?

Corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 12-15, 19-22, as understood in light of the spec, are rejected under 35

U.S.C. 102(e) as being fully anticipated by Lee (US 6,713,936).

Lee discloses an electric motor (fig 3-5) comprising:

a housing (h);

at least one rotor (m) provided with magnetized regions and mounted rotatably about a rotor axis in the housing, and

a stator (10, 20) having two stator units, each stator unit including a set of first pole shoes (15, 25) formed as claw poles (16, 26) and a set of second pole shoes (11, 21) formed as claw poles (12, 22) which are disposed around the rotor axis, as well as respective coils (13, 23) positioned following the rotor in the direction of the rotor axis and with its windings arranged to encircle the rotor axis, by means of which the first and second pole shoes can be magnetized, the stator unit having two pole shoe elements of which a first pole shoe element has a first pole shoe carrier which extends transversely with respect to the rotor axis and is disposed on a side of the coil facing the rotor, as well as the first pole shoes formed integrally onto this carrier, which first pole shoes extend away from the first pole shoe carrier in a first direction approximately parallel to the rotor axis, and of which a second pole shoe element has a second pole shoe carrier which extends transversely with respect to the rotor axis and is disposed on a side of the coil facing away from the rotor, as well as the second pole shoes

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formed integrally onto this carrier, which second pole shoes also extend the first direction away from the second pole shoe carrier approximately parallel to the rotor axis beyond the rotor (figs 3-4), and

the first pole shoe elements carrying respective connecting elements (15', 25') which is formed as sleeves integrally onto the first pole shoe carrier and establishes a magnetic circuit between the pole shoe carriers, the connecting element being fixedly connected to the second pole shoe carrier, and wherein the connecting sleeves (15', 25') form a winding former for the coil; wherein

the second pole shoes (11, 21) overlap the coil;

the first and second pole shoes lie on the same cylindrical surface which extends about the rotor axis and that the one-pole shoes are disposed in the gaps between the other pole shoes (figs 3-5);

the pole shoes disposed successively in an azimuthal direction around the rotor axis have identical angular spacings from each other (figs 3-4);

the first and second pole shoes extend so far in the first direction that their ends lie in a common plane running perpendicular to the rotor axis (figs 3-5)

Regarding claims 2 and 5-6 reciting method of forming, the connecting element is formed onto the pole shoe carrier (as shown in fig 4); the method of forming "by means of deep drawing" or "by means of joining, specifically welding" are not given any patentable weight because a "product by process" claim is directed to the product per se, no matter how actually made, *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmimm*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an

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old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Thus, the method of forming a device is not germane to the issue of patentability of the device itself.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 16 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee**, as applied in the rejection against the base claim, in view of **Sakamoto (US 6,707,178)**.

Lee discloses the claimed invention, except for the limitations of the second pole shoe carrier of the stator unit is connected to a bearing support that carries a rotary bearing for the rotor.

Sakamoto, however, teaches a motor having a stator unit is connected to a bearing support (6) that carries a rotary bearing (7) for the rotor (fig 1) for the purpose of providing stationary support for the stator and rotatably support for the rotor's rotation.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by providing the motor with bearing support so that a stator unit is connected to a bearing support that carries a rotary bearing for the rotor, as taught by **Sakamoto**. Doing so would provide mechanical means that would have stationary support for the stator and rotatably support for the rotor's rotation.

Regarding claim 18, the bearing support is made of plastic, **Sakamoto** essential teaching is to provide a bearing support for the stator and the rotor, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select plastic as material for

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fabricating the bearing support. Doing so would provide a lightweight and low-cost bearing support element. Also it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

4. **Claims 7-10**, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee**, as applied in the rejection against the base claim, in view of **Perucchi et al (US 4,417,166)**.

Lee discloses the claimed invention, except for the limitations of the electrically insulating coating on the sides that facing the coil of the connecting element and the pole shoe carrier

Perucchi, however, teaches a stator structure not employing a coil spool or bobbin, but having the core part (7) of stator core (6) serves as the coil spool support, wherein the core part (7) is coated on all with an insulating film (9). This film, on the order of less than or up to 10 microns thickness and is composed of a resin material, once deposited, has the properties of being strongly adherent to the metal of core (6), insulating, compact, and hard, so as to constitute a good support for the turns of copper wire forming coil (8).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by providing the sides that facing the coil of the connecting element and the pole shoe carrier with an electrically insulating coating, as taught by **Perucchi**. Doing so would enable the stator elements serves as coil spool to support the stator coil, wherein the stator elements that function as the coil spool is provided with insulating material to ensure the electrical insulation between the stator elements and the coil. This would reduce additional parts, i.e., coil spool, to the stator structure while the coil support and its insulating to the stator parts are provided.

Regarding claim 10, the coating has a glass-like consistency, Perucchi essential teaching is to provide an electrical insulating layer for the stator elements, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select glass-like material as material for fabricating the bearing support. Doing so has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

5. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee**, as applied in the rejection against the base claim, and in view of **Nakagawa et al (US 5,170,082)** **Lee** discloses the claimed invention, except for the limitations of the corrosion-resistant coating on the pole shoes.

Nakagawa, however, teaches this features (spec and claims section) for the purpose of preventing the stator structure from being rusted.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the motor by providing the stator structure with corrosion-resistant coating, as taught by **Nakagawa**. Doing so would prevent the stator from being rusted and therefore prolong the life span of the motor.

6. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee**, as applied in the rejection against the base claim, and in view of level of ordinary skills of a worker in the art.

Lee discloses the claimed invention, except for the limitations of the holding positions of the rotor units, determined by magnetic effect, relative to the respective stator units, are rotationally displaced in relation to each other by half a pole space. Those skilled in the art would understand that **Lee** essentially discloses the claimed motor, it would have been obvious to an artisan to rearrange the stator and the rotor in relation to the holding positions based upon the size/shape and magnetic characteristics of the rotor and the stator.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the rotor and the stator so that the holding positions thereof are rotationally displaced in relation to each other by half a pole space, as in the claim. This would enhance the magnetic effects for efficient performance of the motor, and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

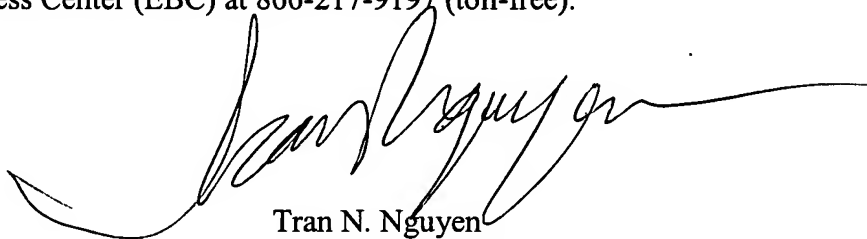
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tran N. Nguyen', with a long horizontal flourish extending to the right.

Tran N. Nguyen
Primary Examiner
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